PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF RECEIPT OF RECORD COPY

(PCT Rule 24.2(a))

To:

LANGER, Edward
P.O. Box 410
43103 Raanana
ISRAËL

Date of mailing (day/month/year)	**IMPORTANT NOTIFICATION**
24 October 2000 (24.10.00)	
Applicant's or agent's file reference	**International application No.**
1221	PCT/IL00/00571

The applicant is hereby notified that the International Bureau has received the record copy of the international application as detailed below.

Name(s) of the applicant(s) and State(s) for which they are applicants:

PYROLOGIC LTD. (for all designated States except US)
OKON, Shmuel (for US)

International filing date	:	14 September 2000 (14.09.00)
Priority date(s) claimed	:	17 September 1999 (17.09.99)
Date of receipt of the record copy by the International Bureau	:	28 September 2000 (28.09.00)
List of designated Offices	:	

AP :GH,GM,KE,LS,MW,MZ,SD,SL,SZ,TZ,UG,ZW
EA :AM,AZ,BY,KG,KZ,MD,RU,TJ,TM
EP :AT,BE,CH,CY,DE,DK,ES,FI,FR,GB,GR,IE,IT,LU,MC,NL,PT,SE
OA :BF,BJ,CF,CG,CI,CM,GA,GN,GW,ML,MR,NE,SN,TD,TG
National :AE,AG,AL,AM,AT,AU,AZ,BA,BB,BG,BR,BY,BZ,CA,CH,CN,CR,CU,CZ,DE,DK,DM,DZ,EE, ES,FI,GB,GD,GE,GH,GM,HR,HU,ID,IL,IN,IS,JP,KE,KG,KP,KR,KZ,LC,LK,LR,LS,LT,LU,LV,MA, MD,MG,MK,MN,MW,MX,MZ,NO,NZ,PL,PT,RO,RU,SD,SE,SG,SI,SK,SL,TJ,TM,TR,TT,TZ,UA,UG,US, UZ,VN,YU,ZA,ZW

ATTENTION

The applicant should carefully check the data appearing in this Notification. In case of any discrepancy between these data and the indications in the international application, the applicant should immediately inform the International Bureau.

In addition, the applicant's attention is drawn to the information contained in the Annex, relating to:

- [X] time limits for entry into the national phase
- [ ] confirmation of precautionary designations
- [X] requirements regarding priority documents

A copy of this Notification is being sent to the receiving Office and to the International Searching Authority.

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer:
Athina Nickitas-Etienne

Telephone No. (41-22) 338.83.38

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Commissioner
US Department of Commerce
United States Patent and Trademark
Office, PCT
2011 South Clark Place Room
CP2/5C24
Arlington, VA 22202
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 01 August 2001 (01.08.01)	
International application No. PCT/IL00/00571	**Applicant's or agent's file reference** 1221
International filing date (day/month/year) 14 September 2000 (14.09.00)	**Priority date** (day/month/year) 17 September 1999 (17.09.99)
Applicant OKON, Shmuel	

1. The designated Office is hereby notified of its election made:

[X] in the demand filed with the International Preliminary Examining Authority on:

17 April 2001 (17.04.01)

[ ] in a notice effecting later election filed with the International Bureau on:

2. The election [X] was

[ ] was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Claudio Borton

Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

PCT

FILE COPY

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 1221	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/IL00/00571	International filing date *(day/month/year)* 14 September 2000 (14.09.2000)	Priority date *(day/month/year)* 17 September 1999 (17.09.1999)
International Patent Classification (IPC) or national classification and IPC IPC(7): G05B 19/02 and US Cl.: 340/825.22		
Applicant PRYOLOGIC LTD.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of ___ sheets, including this cover sheet.

   ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of ___ sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the report
   - II ☐ Priority
   - III ☐ Non-establishment of report with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☒ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
17 April 2001 (17.04.2001)	16 April 2002 (16.04.2002)
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3230	Authorized officer Michael Horabik Telephone No. 703-305-8576

Form PCT/IPEA/409 (cover sheet)(July 1998)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/IL00/00571

FILE COPY

I. Basis of the report

1. With regard to the **elements** of the international application:*

☒ the international application as originally filed.

☒ the description:
pages 1-9 as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____.

☒ the claims:
pages 10-12 , as originally filed
pages NONE , as amended (together with any statement) under Article 19
pages NONE , filed with the demand
pages NONE , filed with the letter of _____.

☒ the drawings:
pages 1-5 , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____.

☐ the sequence listing part of the description:
pages NONE , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____.

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination(under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in printed form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages NONE

☐ the claims, Nos. NONE

☐ the drawings, sheets/~~fig~~ NONE

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

** Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).*
*** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/IL00/00571

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V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. STATEMENT

Novelty (N)	Claims	2-3 and 9-10	YES
	Claims	1, 4-8 and 11-12	NO
Inventive Step (IS)	Claims	NONE	YES
	Claims	1-12	NO
Industrial Applicability (IA)	Claims	1-12	YES
	Claims	NONE	NO

2. CITATIONS AND EXPLANATIONS

Please See Continuation Sheet

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VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the questions whether the claims are fully supported by the description, are made:

Claims 13-14 are indefinite and defective.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/IL00/00571PCT/US01/11111

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Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of Certain Documents Cited

1. Certain published documents (Rule 70.10)

Application No Patent No.	Publication Date *(day/month/year)*	Filing Date *(day/month/year)*	Priority date (valid claim) *(day/month/year)*
None	None	None	None

2. Non-written disclosures (Rule 70.9)

Kind of non-written disclosure	Date of non-written disclosure *(day/month/year)*	Date of written disclosure referring to non-written disclosure *(day/month/year)*
None	None	None

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Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Claims 1,4-8 and 11-12 lack novelty under PCT Article 33(2) as being anticipated by Guerreri (4,884,506).

Regarding claim 1, Guerreri discloses a fireworks remote control system (abstract, lines 1-11) comprising: a central terminal unit (Fig. 1, col. 2, line 63 to col. 3, line 40, command unit (11)); a plurality of remote activation units (Fig. 1, col. 2, line 63 to col. 3, line 40, activation unit (14).

Regarding claim 4, Guerreri continues, as disclosed in claim 1, to disclose a beacon signal (col. 3, lines 41-52, transmitter provide firing command).

Regarding claim 5, Guerreri continues, as disclosed in claim 1, to disclose an automatic mode (col. 3, lines 41-52, timed sequence).

Regarding claim 6, Guerreri continues, as disclosed in claim 1, to disclose each remote activation unit is programmable to enable receipt of said command control signal (col. 3, lines 41-52, transmitter provide firing command; col. 4, lines 15-29, an identifying code for each activation unit).

Claims 7-8 and 11-12 recite a method of fireworks remote control system in claims 1 and 4-6. The method claimed is anticipated in that it simply follows the logical implementation of fireworks remote control system indicate in the claims in performing each of the functional operations of fireworks remote control system. Accordingly, the inventive embodiments set forth in claims 7-8 and 11-12 are met by the cited references and associated arguments as set forth above and incorporated herein. Therefore, it is considered that lack of the limitations expressed in claims 7-8 and 11-12 would have been anticipated to the artisan of ordinary skill for the reasons given in lack of claims 1 and 4-6.

Claims 2-3 and 9-10 lack an inventive step under PCT Article 33(3) as being obvious over Guerreri in view of Lay (5,734,968).

Regarding claim 2, Guerreri continues, as disclosed in claim 1, to disclose actuation by remote control unit (col. 4, lines 3-29, disarm, arm or detonate) requiring power supply. But Guerreri is silent on command control signals including a sleep command which activate a power saving mode in a remote control unit.

However, Lay discloses, in the art of pyrotechnique, two activating switches (col. W, lines 14-51; col. 3, lines 5-27, pyrotechnic display) to prevent inadvertent detonation. Furthermore, one of ordinary skill recognizes activating a single switch and then two switches and sleep mode and awake mode provide same function of power saving outcome. Therefore, it would have been obvious to a person skilled in the art to include sleep mode for power saving mode in the device of Guerreri because one skilled in the art recognizes sleep mode minimizes power consumption.

Regarding claim 3, Lay continues, as disclosed in claim 2, to disclose a wake-up commands (col. 3, lines 5-27, second switch command signal resulting two switches-on or wake-up).

Claims 9-10 recite a method of fireworks remote control system in claims 2-3. The method claimed is obvious in that it simply follows the logical implementation of fireworks remote control system indicate in the claims in performing each of the functional operations of fireworks remote control system. Accordingly, the inventive embodiments set forth in claims 9-10 are met by the cited references and associated arguments as set forth above and incorporated herein. Therefore, it is considered that lack of the

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Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

limitations expressed in claims 9-10 would have been obvious to the artisan of ordinary skill for the reasons given in lack of claims 2-3.

---------- NEW CITATIONS ----------

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IL00/00571

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G05B 19/02
US CL : 340/825.22

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 340/825.22

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,884,506 A (GUERRERI) 05 December 1989 (5,12,1989), column 2, lines 63-68 to column 8, lines 1-14,	1, 4-8 and 11-14
Y	US 5,069,129 A (KUNITOMO) 03 December 1991 (03,12,1978), column 2, lines 26-68 to column 4, lines 1-3,	1, 4-8 and 11-14
X	US 5,734,968 A (LAY) 31 March 1998 (31,03,1998), column 2, lines 15-51,	2-3 and 9-10

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
13 January 2001 (13.01.2001)	22 FEB 2001
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3988	Authorized officer Michael Horabik Telephone No. 7033054704

Form PCT/ISA/210 (second sheet) (July 1998)

PATENT COOPERATION TREATY

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INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 1221	**FOR FURTHER ACTION**	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/IL00/00571	International filing date (*day/month/year*) 14 September 2000 (14.09.2000)	(Earliest) Priority Date (*day/month/year*) 17 September 1999 (17.09.1999)
Applicant PYROLOGIC LTD.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of ____ sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the Report**
   a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
   ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
   b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:
   ☐ contained in the international application in written form.
   ☐ filed together with the international application in computer readable form.
   ☐ furnished subsequently to this Authority in written form.
   ☐ furnished subsequently to this Authority in computer readable form.
   ☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
   ☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
2. ☐ **Certain claims were found unsearchable** (See Box I).
3. ☐ **Unity of invention is lacking** (See Box II).
4. With regard to the **title**,
   ☒ the text is approved as submitted by the applicant.
   ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,
   ☐ the text is approved as submitted by the applicant.
   ☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. Figure 1
   ☒ as suggested by the applicant.
   ☐ because the applicant failed to suggest a figure.
   ☐ because this figure better characterizes the invention.
   ☐ None of the figures

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IL00/00571

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Box III TEXT OF THE ABSTRACT (Continuation of Item 5 of the first sheet)

The technical features mentioned in the abstract do not include a reference sign between parentheses (PCT Rule 8.1(d)).

NEW ABSTRACT

A fireworks remote control system (10), with a plurality of individual firing units (14) being activatied by wireless command in a desired manual or automatic sequence via a one-way communication from a teminal unit (12), insuring complete flexibility in the location of each individual firework, in a simple, low cost system, without sacrificing a high level of reliability and performance. The system comprises a terminal unit (TU) (12) equipped with a unique ID code, and a plurality of generic remote activation units (RAU) (14), each equipped with an independent power supply and controlled by a microprocessor. The RAUs (14) are each capable of being assigned by the user to a unique terminal unit (12) , by programming it with the terminal unit ID code. The system includes power saving features for periods when not in use, and also features a safety mechanism comprising a beacon signal, that when discontinued (in case of communication failure), will cause disabling of the remote activation units (14).

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IL00/00571 FILE COPY

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G05B 19/02
US CL : 340/825.22

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 340/825.22

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,884,506 A (GUERRERI) 05 December 1989 (5,12,1989), column 2, lines 63-68 to column 8, lines 1-14,	1, 4-8 and 11-14
Y	US 5,069,129 A (KUNITOMO) 03 December 1991 (03,12,1978), column 2, lines 26-68 to column 4, lines 1-3,	1, 4-8 and 11-14
X	US 5,734,968 A (LAY) 31 March 1998 (31,03,1998), column 2, lines 15-51,	2-3 and 9-10

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
13 January 2001 (13.01.2001)	
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3988	Authorized officer Michael Horabik Telephone No. 7033054704

Form PCT/ISA/210 (second sheet) (July 1998)

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PATENT COOPERATION TREATY

REC'D 27 MAY 2002
WIPO PCT

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

8

Applicant's or agent's file reference 1221	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/IL00/00571	International filing date *(day/month/year)* 14 September 2000 (14.09.2000)	Priority date *(day/month/year)* 17 September 1999 (17.09.1999)
International Patent Classification (IPC) or national classification and IPC IPC(7): G05B 19/02 and US Cl.: 340/825.22		
Applicant PRYOLOGIC LTD.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

   ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 0 sheets.

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GROUP 3600

3. This report contains indications relating to the following items:

   - I ☒ Basis of the report
   - II ☐ Priority
   - III ☐ Non-establishment of report with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☒ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
17 April 2001 (17.04.2001)	16 April 2002 (16.04.2002)
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3230	Authorized officer Michael Horabik Telephone No. 703-305-8576

Form PCT/IPEA/409 (cover sheet)(July 1998)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/IL00/00571

I. Basis of the report

1. With regard to the **elements** of the international application:*

☒ the international application as originally filed.

☒ the description:
pages 1-9 as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

☒ the claims:
pages 10-12, as originally filed
pages NONE, as amended (together with any statement) under Article 19
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

☒ the drawings:
pages 1-5, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

☐ the sequence listing part of the description:
pages NONE, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination(under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in printed form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages NONE

☐ the claims, Nos. NONE

☐ the drawings, sheets/~~fig~~ NONE

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

** Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).*

*** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/IL00/00571

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. STATEMENT

Novelty (N)	Claims	2-3 and 9-10	YES
	Claims	1, 4-8 and 11-12	NO
Inventive Step (IS)	Claims	NONE	YES
	Claims	1-12	NO
Industrial Applicability (IA)	Claims	1-12	YES
	Claims	NONE	NO

2. CITATIONS AND EXPLANATIONS
Please See Continuation Sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the questions whether the claims are fully supported by the description, are made:

Claims 13-14 are indefinite and defective.

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

Claims 1,4-8 and 11-12 lack novelty under PCT Article 33(2) as being anticipated by Guerreri (4,884,506).

Regarding claim 1, Guerreri discloses a fireworks remote control system (abstract, lines 1-11) comprising: a central terminal unit (Fig. 1, col. 2, line 63 to col. 3, line 40, command unit (11)); a plurality of remote activation units (Fig. 1, col. 2, line 63 to col. 3, line 40, activation unit (14).

Regarding claim 4, Guerreri continues, as disclosed in claim 1, to disclose a beacon signal (col. 3, lines 41-52, transmitter provide firing command).

Regarding claim 5, Guerreri continues, as disclosed in claim 1, to disclose an automatic mode (col. 3, lines 41-52, timed sequence).

Regarding claim 6, Guerreri continues, as disclosed in claim 1, to disclose each remote activation unit is programmable to enable receipt of said command control signal (col. 3, lines 41-52, transmitter provide firing command; col. 4, lines 15-29, an identifying code for each activation unit).

Claims 7-8 and 11-12 recite a method of fireworks remote control system in claims 1 and 4-6. The method claimed is anticipated in that it simply follows the logical implementation of fireworks remote control system indicate in the claims in performing each of the functional operations of fireworks remote control system. Accordingly, the inventive embodiments set forth in claims 7-8 and 11-12 are met by the cited references and associated arguments as set forth above and incorporated herein. Therefore, it is considered that lack of the limitations expressed in claims 7-8 and 11-12 would have been anticipated to the artisan of ordinary skill for the reasons given in lack of claims 1 and 4-6.

Claims 2-3 and 9-10 lack an inventive step under PCT Article 33(3) as being obvious over Guerreri in view of Lay (5,734,968).

Regarding claim 2, Guerreri continues, as disclosed in claim 1, to disclose actuation by remote control unit (col. 4, lines 3-29, disarm, arm or detonate) requiring power supply. But Guerreri is silent on command control signals including a sleep command which activate a power saving mode in a remote control unit.

However, Lay discloses, in the art of pyrotechnique, two activating switches (col. W, lines 14-51; col. 3, lines 5-27, pyrotechnic display) to prevent inadvertent detonation. Furthermore, one of ordinary skill recognizes activating a single switch and then two switches and sleep mode and awake mode provide same function of power saving outcome. Therefore, it would have been obvious to a person skilled in the art to include sleep mode for power saving mode in the device of Guerreri because one skilled in the art recognizes sleep mode minimizes power consumption.

Regarding claim 3, Lay continues, as disclosed in claim 2, to disclose a wake-up commands (col. 3, lines 5-27, second switch command signal resulting two switches-on or wake-up).

Claims 9-10 recite a method of fireworks remote control system in claims 2-3. The method claimed is obvious in that it simply follows the logical implementation of fireworks remote control system indicate in the claims in performing each of the functional operations of fireworks remote control system. Accordingly, the inventive embodiments set forth in claims 9-10 are met by the cited references and associated arguments as set forth above and incorporated herein. Therefore, it is considered that lack of the

Supplemental Box
(To be used when the space in any of the preceding boxes is not sufficient)

limitations expressed in claims 9-10 would have been obvious to the artisan of ordinary skill for the reasons given in lack of claims 2-3.

---------- NEW CITATIONS ----------
NONE

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
EDWARD LANGER
POB 410
RAANANA, ISRAEL 43103

PTO/PCT Rec'd 15 MAR 2002

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT OR THE DECLARATION

(PCT Rule 44.1)

	Date of Mailing (*day/month/year*) 22 FEB 2001
Applicant's or agent's file reference 1221	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No. PCT/IL00/00571	International filing date (*day/month/year*) 14 September 2000 (14.09.2000)
Applicant PYROLOGIC LTD.	

1. ☒ The applicant is hereby notified that the international search report has been established and is transmitted herewith.
Filing of amendments and statement under Article 19:
The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the international search report; however, for more details, see the notes on the accompany sheet.

Where? Directly to the International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland
Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Further action(s):** The applicant is reminded of the following:

Shortly after **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application , or of the priority claim, must reach the International Bureau as provided in rules 90 *bis* 1 and 90 *bis* 3, respectively, before the completion of the technical preparations for international publication.

Within **19 months** from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within **20 months** from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3988	Authorized officer Michael Horabik Telephone No. 7033084704

Form PCT/ISA/220 (July 1998)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 1221	**FOR FURTHER ACTION**	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/IL00/00571	International filing date *(day/month/year)* 14 September 2000 (14.09.2000)	(Earliest) Priority Date *(day/month/year)* 17 September 1999 (17.09.1999)
Applicant PYROLOGIC LTD.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the Report**
   a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
   ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
   b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:
   ☐ contained in the international application in written form.
   ☐ filed together with the international application in computer readable form.
   ☐ furnished subsequently to this Authority in written form.
   ☐ furnished subsequently to this Authority in computer readable form.
   ☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
   ☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
2. ☐ **Certain claims were found unsearchable** (See Box I).
3. ☐ **Unity of invention is lacking** (See Box II).
4. With regard to the **title**,
   ☒ the text is approved as submitted by the applicant.
   ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,
   ☐ the text is approved as submitted by the applicant.
   ☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. Figure 1
   ☒ as suggested by the applicant. ☐ None of the figures
   ☐ because the applicant failed to suggest a figure.
   ☐ because this figure better characterizes the invention.

INTERNATIONAL SEARCH REPORT

International application No.

PCT[redacted]/00571

Box III TEXT OF THE ABSTRACT (Continuation of Item 5 of the first sheet)

The technical features mentioned in the abstract do not include a reference sign between parentheses (PCT Rule 8.1(d)).

NEW ABSTRACT

A fireworks remote control system (10), with a plurality of individual firing units (14) being activatied by wireless command in a desired manual or automatic sequence via a one-way communication from a teminal unit (12), insuring complete flexibility in the location of each individual firework, in a simple, low cost system, without sacrificing a high level of reliability and performance. The system comprises a terminal unit (TU) (12) equipped with a unique ID code, and a plurality of generic remote activation units (RAU) (14), each equipped with an independent power supply and controlled by a microprocessor. The RAUs (14) are each capable of being assigned by the user to a unique terminal unit (12) , by programming it with the terminal unit ID code. The system includes power saving features for periods when not in use, and also features a safety mechanism comprising a beacon signal, that when discontinued (in case of communication failure), will cause disabling of the remote activation units (14).

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IL00/00571

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G05B 19/02
US CL : 340/825.22

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 340/825.22

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,884,506 A (GUERRERI) 05 December 1989 (5,12,1989), column 2, lines 63-68 to column 8, lines 1-14,	1, 4-8 and 11-14
Y	US 5,069,129 A (KUNITOMO) 03 December 1991 (03,12,1978), column 2, lines 26-68 to column 4, lines 1-3,	1, 4-8 and 11-14
X	US 5,734,968 A (LAY) 31 March 1998 (31,03,1998), column 2, lines 15-51,	2-3 and 9-10

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
13 January 2001 (13.01.2001)	22 FEB 2001
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3988	Authorized officer Michael Horabik Telephone No. 7033054704

Form PCT/ISA/210 (second sheet) (July 1998)